

AMENDMENTS TO THE CLAIMS:

This listing of claims replaces all prior versions of claims in the application.

Listing of Claims

1. (currently amended) A pharmaceutical preparation comprising a compound (I)

(i) which can be obtained by reacting a compound (II) having a free amino group, said compound (II) having a free amino group being selected from the group consisting of doxorubicin, peptides, proteins, enzymes and ~~amino acid derivatives~~ dopamine, with a sugar (III) having the reducing power and selected from the group A, wherein an amino group of said compound (II) having a free amino group reacts with an aldehyde group in said sugar (III) having the reducing power, wherein a new amide bond is not formed by the reaction, and

(ii) ~~which is capable of rapidly releasing~~ releases said compound (II) having a free amino group in response to changes in pH,

wherein the group A consists of glucose, lactose, fucosylglucose, galactosyllactose, fucosyllactose, lacto-N-tetraose, lacto-N-hexaose, lacto-N-neohexaose, dimannosyl-N-acetylglucosamine, sialyllactose, disialyllactose, N,o-diacetylneuraminyllactose, 3'-sialyllactose 6'-sulfate, lactose 6'-sulfate, lactose 3'-phosphate, disialylacto-N-tetraose, glycolipids, and compounds prepared by chemically binding a polymer selected from the group consisting of polyoxyethylene, polyglutamic acid and polyvinylpyrrolidone to a hydroxyl group other than the hydroxyl group formed from the reducing aldehyde group of a sugar selected from the group B, wherein the group B consists of glucose, lactose, fucosylglucose, galactosyllactose, fucosyllactose, lacto-N-tetraose, lacto-N-hexaose, lacto-N-neohexaose, dimannosyl-N-acetylglucosamine, sialyllactose, disialyllactose, N,o-

diacetylneuraminyllactose, 3'-sialyllactose 6'-sulfate, lactose 6'-sulfate, lactose 3' - phosphate, disialyllacto-N-tetraose, and glycolipids.

2. (currently amended) The preparation according to claim 1, wherein said compound (II) having a free amino group selected from the group consisting of doxorubicin, peptides, proteins, enzymes and ~~amino acid derivatives~~ dopamine is a pharmaceutical compound.

3. (currently amended) The preparation according to claim 1, wherein said compound (II) having a free amino group is selected from the group consisting of peptides, proteins, enzymes and amino acid derivatives dopamine.

4. (currently amended) The preparation according to claim 3 (1), wherein said peptide is insulin.

5. (currently amended) The preparation according to claim 1, wherein at least one of said compound (II) having a free amino group selected from the group consisting of doxorubicin, peptides, proteins, enzymes and ~~amino acid derivatives~~ dopamine, and said sugar (III) having the reducing power selected from group A, is modified with or encapsulated in a pharmaceutical carrier; or

and said compound (I) which can be obtained by reacting said compound (II) having a free amino group with said sugar having the reducing power selected from the group A, wherein an amino group of said compound (II) having a free amino group reacts with an aldehyde group in said sugar (III) having the reducing power, is

modified with, or included encapsulated in a the pharmaceutical carrier.

6. (original) The preparation according to claim 5, wherein said pharmaceutical carrier is selected from the group consisting of liposome, lipid emulsion, microemulsion, polymer micelle, microcapsule, microsphere and magnetic particles.

7. (currently amended) The preparation according to claim 5 or 6, wherein said compound (II) having a free amino group selected from the group consisting of doxorubicin, peptides, proteins, enzymes and ~~amino acid derivatives~~ dopamine is ~~included~~ encapsulated in said a pharmaceutical carrier.

8. (currently amended) The preparation according to claim ~~5 or 6~~ 2, wherein a said pharmaceutical compound is included in said pharmaceutical carrier.

9. (currently amended) The preparation according to claim 2, wherein at least one of said pharmaceutical compound, and said sugar (III) having the reducing power selected from group A, is modified with or encapsulated in a pharmaceutical carrier; or

~~and said a~~ compound which can be obtained by reacting said pharmaceutical compound with said sugar (III) having the reducing power selected from group A, wherein an aldehyde group in said sugar (III) having the reducing power is modified with or ~~included~~ encapsulated in a said pharmaceutical carrier.

10. (previously submitted) The preparation according to claim 9, wherein said

pharmaceutical carrier is selected from the group consisting of liposome, lipid emulsion, microemulsion, polymer micelle, microcapsule, microsphere and magnetic particles.

11. (currently amended) The preparation according to claim 9, wherein said pharmaceutical compound is ~~included~~ encapsulated in said pharmaceutical carrier.

12. (currently amended) The preparation according to claim 10, wherein said pharmaceutical compound is ~~included~~ encapsulated in said pharmaceutical carrier.

13. (currently amended) The preparation according to claim 3, wherein at least one of said compound having a free amino group selected from the group consisting of peptides, proteins, enzymes and ~~amino acid derivatives~~ dopamine, said sugar (III) having the reducing power selected from the group A, is modified with or encapsulated in a pharmaceutical carrier; or

~~and said a~~ compound which can be obtained by reacting said compound having a free amino group with said sugar (III) having the reducing power selected from group A, wherein an amino group of said compound having a free amino group reacts with an aldehyde group in said sugar (III) having the reducing power is modified with or ~~included~~ encapsulated in a the pharmaceutical carrier.

14. (previously submitted) The preparation according to claim 13, wherein said pharmaceutical carrier is selected from the group consisting of liposome, lipid emulsion, microemulsion, polymer micelle, microcapsule, microsphere and magnetic

particles.

15. (currently amended) The preparation according to claim 13, wherein said compound having a free amino group selected from the group consisting of peptides, proteins, enzymes and ~~amino acid derivatives~~ dopamine is included encapsulated in said pharmaceutical carrier.

16. (currently amended) The preparation according to claim 14, wherein said compound having a free amino group selected from the group consisting of peptides, proteins, enzymes ~~amino acid derivatives~~ dopamine is included encapsulated in said pharmaceutical carrier.

17. (currently amended) The preparation according to Claim 4, wherein at least one of insulin, and said sugar (III) having the reducing power selected from the group A, is modified with or encapsulated in a pharmaceutical carrier; or ~~and said~~ a compound which can be obtained by reacting insulin with said sugar (III) having the reducing power selected from group A, wherein an amino group of said insulin reacts with an aldehyde group in said sugar (III) having the reducing power is modified with or ~~included~~ encapsulated in a the pharmaceutical carrier.

18. (previously submitted) The preparation according to claim 17, wherein said pharmaceutical carrier is selected from the group consisting of liposome, lipid emulsion, microemulsion, polymer micelle, microcapsule, microsphere and magnetic particles.

19. (currently amended) The preparation according to claim 17, wherein insulin is ~~included~~ encapsulated in said pharmaceutical carrier.

20. (currently amended) The preparation according to claim 18, wherein insulin is encapsulated in said pharmaceutical carrier.

21. (currently amended) The preparation according to claim 1, wherein said compound (II) having a free amino group selected from the group consisting of doxorubicin, peptides, proteins, enzymes and ~~amino acid derivatives~~ dopamine is a peptide.

22. (currently amended) The preparation according to claim 3 ~~21~~, wherein said peptide is enkephalin.

23. (currently amended) The preparation according to claim 21, wherein at least one of said peptide, and said sugar (III) having the reducing power selected from the group A, is modified with or encapsulated in a pharmaceutical carrier; or ~~and said~~ a compound which can be obtained by reacting said peptide with said sugar (III) having the reducing power selected from group A, wherein an amino group of said peptide reacts with an aldehyde group in said sugar (III) having the reducing power is modified with or ~~included~~ encapsulated in a the pharmaceutical carrier.

24. (previously submitted) The preparation according to claim 23, wherein said pharmaceutical carrier is selected from the group consisting of liposome, lipid emulsion, microemulsion, polymer micelle, microcapsule, microsphere and magnetic particles.

25. (currently amended) The preparation according to claim 23, wherein said peptide is ~~included~~ encapsulated in said pharmaceutical carrier.

26. (currently amended) The preparation according to claim 24, wherein said peptide is ~~included~~ encapsulated in said pharmaceutical carrier.

27. (currently amended) The preparation according to claim 22, wherein at least one of enkephalin, said sugar (III) having the reducing power selected from the group A, is modified with or encapsulated in a pharmaceutical carrier; or ~~and said a~~ compound which can be obtained by reacting enkephalin with said sugar (III) having the reducing power selected from group A, wherein an amino group of said insulin reacts with an aldehyde group in said sugar (III) having the reducing power is modified with or ~~included~~ encapsulated in a the pharmaceutical carrier.

28. (previously submitted) The preparation according to claim 27, wherein said pharmaceutical carrier is selected from the group consisting of liposome, lipid emulsion, microemulsion, polymer micelle, microcapsule, microsphere and magnetic particles.

29. (currently amended) The preparation according to claim 27, wherein enkephalin is ~~included~~ encapsulated in said pharmaceutical carrier.

30. (currently amended) The preparation according to claim 28, wherein enkephalin is ~~included~~ encapsulated in said pharmaceutical carrier.

31. (new) A pharmaceutical preparation comprising a compound (I)
(i) which can be obtained by reacting a compound (II) having a free amino group, said compound (II) having a free amino group being selected from the group consisting of doxorubicin, peptides, proteins, enzymes and dopamine, with a sugar (III) having the reducing power selected from the group consisting of sialyllactose, lactose, glucose and disialyllactose, wherein an amino group of said compound (II) having a free amino group reacts with an aldehyde group in said sugar (III) having the reducing power, and
(ii) which rapidly releases said compound (II) having a free amino group in response to changes in pH.

32. (new) The preparation according to claim 31, wherein said compound (II) having a free amino group selected from the group consisting of doxorubicin, peptides, proteins, enzymes and dopamine is a pharmaceutical compound.

33. (new) The preparation according to claim 31, wherein said compound (II) having a free amino group is selected from the group consisting of peptides, proteins, enzymes and dopamine.

34. (new) The preparation according to claim 31 , wherein said peptide is insulin.

35. (new) The preparation according to claim 31, wherein at least one of said compound (II) having a free amino group selected from the group consisting of doxorubicin, peptides, proteins, enzymes and dopamine, and said sugar (III) having the reducing power selected from the group consisting of sialyllactose, lactose, glucose and disialyllactose, is modified with or encapsulated in a pharmaceutical carrier; or

said compound (I) which can be obtained by reacting said compound (II) having a free amino group with said sugar (III) having the reducing power selected from the group consisting of sialyllactose, lactose, glucose and disialyllactose, wherein an amino group of said compound (II) having a free amino group reacts with an aldehyde group in said sugar (III) having the reducing power, is modified with or encapsulated in the pharmaceutical carrier.

36. (new) The preparation according to claim 35, wherein said pharmaceutical carrier is selected from the group consisting of liposome, lipid emulsion, microemulsion, polymer micelle, microcapsule, microsphere and magnetic particles.

37. (new) The preparation according to claim 35 or 36, wherein said compound (II) having a free amino group selected from the group consisting of doxorubicin, peptides, proteins, enzymes and dopamine is encapsulated in said pharmaceutical carrier.

38. (new) The preparation according to claim 32, wherein said pharmaceutical compound is encapsulated in a pharmaceutical carrier.

39. (new) The preparation according to claim 32, wherein at least one of said pharmaceutical compound, and said sugar (III) having the reducing power selected from the group consisting of sialyllactose, lactose, glucose and disialyllactose, is modified with or encapsulated in a pharmaceutical carrier, or

a compound which can be obtained by reacting said pharmaceutical compound with said sugar (III) having the reducing power selected from the group consisting of sialyllactose, lactose, glucose and disialyllactose, wherein an amino group of said pharmaceutical compound reacts with an aldehyde group in said sugar (III) having the reducing power, is modified with or encapsulated in the pharmaceutical carrier.

40. (new) The preparation according to claim 39, wherein said pharmaceutical carrier is selected from the group consisting of liposome, lipid emulsion, microemulsion, polymer micelle, microcapsule, microsphere and magnetic particles.

41. (new) The preparation according to claim 39, wherein said pharmaceutical compound is encapsulated in said pharmaceutical carrier.

42. (new) The preparation according to claim 40, wherein said pharmaceutical compound is encapsulated in said pharmaceutical carrier.

43. (new) The preparation according to claim 33, wherein at least one of said compound having a free amino group selected from the group consisting of peptides, proteins, enzymes and dopamine, said sugar (III) having the reducing power selected from the group consisting of sialyllactose, lactose, glucose and disialyllactose, is modified with or encapsulated in a pharmaceutical carrier or,

a compound which can be obtained by reacting said compound having a free amino group with said sugar (III) having the reducing power selected from the group consisting of sialyllactose, lactose, glucose and disialyllactose, wherein an amino group of said compound having a free amino group reacts with an aldehyde group in said sugar (III) having the reducing power, is modified with or encapsulated in the pharmaceutical carrier.

44. (new) The preparation according to claim 43, wherein said pharmaceutical carrier is selected from the group consisting of liposome, lipid emulsion, microemulsion, polymer micelle, microcapsule, microsphere and magnetic particles.

45. (new) The preparation according to claim 43, wherein said compound having a free amino group selected from the group consisting of peptides, proteins, enzymes and dopamine is encapsulated in said pharmaceutical carrier.

46. (new) The preparation according to claim 44, wherein said compound having a free amino group selected from the group consisting of peptides, proteins,

enzymes and dopamine is encapsulated in said pharmaceutical carrier.

47. (new) The preparation according to claim 44, wherein at least one of insulin, and said sugar (III) having the reducing power selected from the group consisting of sialyllactose, lactose, glucose and disialyllactose, is modified with or encapsulated in a pharmaceutical carrier or

a compound which can be obtained by reacting insulin with said sugar (III) having the reducing power selected from the group consisting of sialyllactose, lactose, glucose and disialyllactose, wherein an amino group of insulin reacts with an aldehyde group in said sugar (III) having the reducing power, is modified with or encapsulated in the pharmaceutical carrier.

48. (new) The preparation according to claim 47, wherein said pharmaceutical carrier is selected from the group consisting of liposome, lipid emulsion, microemulsion, polymer micelle, microcapsule, microsphere and magnetic particles.

49. (new) The preparation according to claim 47, wherein insulin is encapsulated in said pharmaceutical carrier.

50. (new) The preparation according to claim 48, wherein insulin is encapsulated in said pharmaceutical carrier.

51. (new) The preparation according to claim 31, wherein said compound (II) having a free amino group selected from the group consisting of doxorubicin,

peptides, proteins, enzymes and dopamine is a peptide.

52. (new) The preparation according to claim 51, wherein said peptide is enkephalin.

53. (new) The preparation according to claim 51, wherein at least one of said peptide, and said sugar (III) having the reducing power selected from the group consisting of sialyllactose, lactose, glucose and disialyllactose is modified with or encapsulated in a pharmaceutical carrier; or

a compound which can be obtained by reacting said peptide with said sugar (III) having the reducing power selected from the group consisting of sialyllactose, lactose, glucose and disialyllactose, wherein an amino group of said peptide reacts with an aldehyde group in said sugar (III) having the reducing power, is modified with or encapsulated in the pharmaceutical carrier.

54. (new) The preparation according to claim 53, wherein said pharmaceutical carrier is selected from the group consisting of liposome, lipid emulsion, microemulsion, polymer micelle, microcapsule, microsphere and magnetic particles.

55. (new) The preparation according to claim 53, wherein said peptide is encapsulated in said pharmaceutical carrier.

56. (new) The preparation according to claim 54, wherein said peptide is encapsulated in said pharmaceutical carrier.

57. (new) The preparation according to claim 52, wherein at least one of enkephalin, and said sugar (III) having the reducing power selected from the group consisting of sialyllactose, lactose, glucose and disialyllactose, is modified with or encapsulated in a pharmaceutical carrier; or

a compound which can be obtained by reacting enkephalin with said sugar (III) having the reducing power selected from the group consisting of sialyllactose, lactose, glucose and disialyllactose, wherein an amino group of enkephalin reacts with an aldehyde group in said sugar (III) having the reducing power, is encapsulated in the pharmaceutical carrier.

58. (new) The preparation according to claim 57, wherein said pharmaceutical carrier is selected from the group consisting of liposome, lipid emulsion, microemulsion, polymer micelle, microcapsule, microsphere and magnetic particles.

59. (new) The preparation according to claim 57, wherein enkephalin is encapsulated in said pharmaceutical carrier.

60. (new) The preparation according to claim 58, wherein enkephalin is encapsulated in said pharmaceutical carrier.